Amdt. Dated November 15, 2004

Reply to Office Action of August 18, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

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Listing of Claims:

1-4. (Canceled)

5. (Previously Presented) A feeder for a surface mounting device, the feeder

comprising:

a main frame;

a parts feeding unit, a vinyl separation unit, and a vinyl recovery unit mounted on

the main frame; and

a drive system comprising a forward and backward rotational force generating

device in communication with and configured to drive each of the parts feeding unit, the vinyl

separation unit, and the vinyl recovery unit.

6. (Canceled)

7. (Currently Amended) The feeder of claim 5, wherein the forward and backward

rotational force generating device comprises a permanent-magnet unit positioned adjacent a

plurality of armature coils.

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- 8. (Currently Amended) The feeder of claim 7, wherein the permanent magnet unit comprises a first disc member having a plurality of S and N polar permanent magnet magnets arranged thereon.
- 9. (Previously Presented) The feeder of claim 8, wherein the plurality of armature coils are provided on a second disc member, and the second disc member is mounted on a drive shaft adjacent to the first disc member.
- 10. (Previously Presented) The feeder of claim 9, further comprising a ball bearing interposed between the first disc member and the drive shaft.
- 11. (Previously Presented) The feeder of claim 5, wherein the forward and backward rotational force generating device is provided on the main frame between the parts feeding unit and the vinyl separation unit.
- 12. (Previously Presented) The feeder of claim 5, wherein the parts feeding unit is in rotational communication with the drive system by means of a first gear train.
- 13. (Currently Amended) The feeder of claim 12, wherein the parts feeding unit comprises a feeding unit driving gear in rotational communication with the drive system by

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means of the first gear train, the feeding unit driving gear having driving teeth provided on an

outer circumferential surface that are configured to engage with holes provided in a tape to

move a-the tape a predetermined distance upon rotation of the drive system by a corresponding

rotational amount.

14. (Previously Presented) The feeder of claim 13, wherein the first gear train

comprises a first feeding unit gear mounted on a shaft of the drive system, an intermediary gear,

and a second feeding unit gear mounted on a shaft with the feeding unit drive gear.

15. (Previously Presented) The feeder of claim 12, wherein the vinyl separation unit is

in rotational communication with the drive system by means of a second gear train.

16. (Previously Presented) The feeder of claim 15, wherein the vinyl separation unit

comprises a first vinyl discharge gear rotatable in a first direction, and a second vinyl discharge

gear rotatable in a second direction, opposite the first direction, and wherein the first vinyl

discharge gear is in rotational communication with the drive system by means of the second gear

train.

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17. (Currently Amended) The feeding feeder of claim 16, wherein the second gear

train comprises a first separation gear in rotational communication with the first vinyl discharge

gear and in rotational communication with a gear mounted on a shaft of the drive system.

18. (Previously Presented) The feeder of claim 15, wherein the vinyl recovery unit is

in rotational communication with the drive system by means of the second gear train and a belt.

19. (Currently Amended) The feeding feeder of claim 18, wherein the vinyl recovery

unit comprises a recovery reel and a recovery unit gear in rotational communication with the

belt.

20. (Previously Presented) The feeder of claim 5, wherein the parts feeding unit, the

vinyl separation unit, and the vinyl recovery unit are driven in synchronization.

21. (Previously Presented) The feeder of claim 5, further comprising a position

sensing unit configured to sense a rotational position of a drive gear of the drive system.

22-24. (Canceled)

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25. (Currently Amended) A feeder for a surface mounting device, the feeder

comprising:

a main frame;

a parts feeding unit, a vinyl separation unit, and a vinyl recovery unit mounted on

the main frame; and

a drive system configured to drive each of the parts feeding unit, the vinyl

separation unit, and the vinyl recovery unit, wherein the parts feeding unit comprises a feeding

unit driving gear in rotational communication with the drive system by means of a first gear

train, the feeding unit driving gear having driving teeth provided on an outer circumferential

surface that are configured to engage with holes provided in a tape to move a the tape a

predetermined distance upon rotation of the drive system by a corresponding rotational amount.

26. (Previously Presented) The feeder of claim 25, wherein the first gear train

comprises a first feeding unit gear mounted on a shaft of the drive system, an intermediary gear,

and a second feeding unit gear mounted on a shaft with the feeding unit drive gear.

27. (Previously Presented) A feeder for a surface mounting device, the feeder

comprising:

a main frame;

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a parts feeding unit, a vinyl separation unit, and a vinyl recovery unit mounted on

the main frame; and

a drive system configured to drive each of the parts feeding unit, the vinyl

separation unit, and the vinyl recovery unit, wherein the parts feeding unit is in rotational

communication with the drive system by means of a first gear train and wherein the vinyl

separation unit is in rotational communication with the drive system by means of a second gear

train and comprises a first vinyl discharge gear rotatable in a first direction, and a second vinyl

discharge gear rotatable in a second direction, opposite the first direction, and wherein the first

vinyl discharge gear is in rotational communication with the drive system by means of the

second gear train.

28. (Currently Amended) The feeding feeder of claim 27, wherein the second gear

train comprises a first separation gear in rotational communication with the first vinyl discharge

gear and in rotational communication with a gear mounted on a shaft of the drive system.

(Previously Presented) A feeder for a surface mounting device, the feeder 29.

comprising:

a main frame;

a parts feeding unit, a vinyl separation unit, and a vinyl recovery unit mounted on

the main frame; and

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a drive system configured to drive each of the parts feeding unit, the vinyl

separation unit, and the vinyl recovery unit, wherein the parts feeding unit is in rotational

communication with the drive system by means of a first gear train, wherein the vinyl separation

unit is in rotational communication with the drive system by means of a second gear train, and

wherein the vinyl recovery unit is in rotational communication with the drive system by means

of the second gear train and a belt.

30. (Currently Amended) The feeding feeder of claim 29, wherein the vinyl recovery

unit comprises a recovery reel and a recovery unit gear in rotational communication with the

belt.